



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Holden's Foundation Seeds, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (T. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

CORN

'LH185'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this 28th day of February in the year of our Lord one thousand nine hundred and ninety-five.

Attest:

Kenneth H. Evans
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Rich R.
Secretary of Agriculture



U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE DIVISION

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(INSTRUCTIONS ON REVERSE)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2428).

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate) HOLDEN'S FOUNDATION SEEDS, INC.		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO. Ex2797		3. VARIETY NAME LH185	
4. ADDRESS (street and no. or R.F.D. no., city, state, and ZIP) 201 N. MAPLEWOOD AVENUE PO BOX 839 WILLIAMSBURG, IA 52361		5. PHONE (include area code) (319)668-1100		FOR OFFICIAL USE ONLY PVPO NUMBER <div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); border: 1px solid black; padding: 2px;">F I L I N G</div> <div style="margin-left: 10px;"> Date <hr/> Time <div style="display: flex; justify-content: space-around;"> <input type="checkbox"/> A.M. <input type="checkbox"/> P.M. </div> </div> </div> <div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); border: 1px solid black; padding: 2px;">F E E S</div> <div style="margin-left: 10px;"> Filing and Examination Fee: \$ <hr/> Date <hr/> </div> </div> <div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); border: 1px solid black; padding: 2px;">R E C E I V E D</div> <div style="margin-left: 10px;"> Certificate Fee: \$ <hr/> Date <hr/> </div> </div>	
6. GENUS AND SPECIES NAME ZEA MAYS		7. FAMILY NAME (Botanical) GRAMINEAE			
8. CROP KIND NAME (Common Name) CORN, FIELD		9. DATE OF DETERMINATION NOVEMBER 1991			
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) CORPORATION					
11. IF INCORPORATED, GIVE STATE OF INCORPORATION IOWA		12. DATE OF INCORPORATION 1968			

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS

**MARK ARMSTRONG
PO BOX 839
WILLIAMSBURG, IA 52361**

PHONE (include area code): **(319)668-1100**

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow INSTRUCTIONS on reverse)

a. <input checked="" type="checkbox"/> Exhibit A, Origin and Breeding History of the Variety	
b. <input checked="" type="checkbox"/> Exhibit B, Novelty Statement	
c. <input checked="" type="checkbox"/> Exhibit C, Objective Description of Variety	
d. <input checked="" type="checkbox"/> Exhibit D, Additional Description of Variety	
e. <input checked="" type="checkbox"/> Exhibit E, Statement of the Basis of Applicant's Ownership	
f. <input checked="" type="checkbox"/> Seed Sample (2,500 viable untreated seeds). Date Seed Sample mailed to Plant Variety Protection Office _____	
g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,325) made payable to "Treasurer of the United States"	

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See section 83(a) of the Plant Variety Protection Act) ☐ YES (If "YES," answer items 16 and 17 below) ☐ NO (If "NO," skip to item 18 below)

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? ☐ YES ☐ NO

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

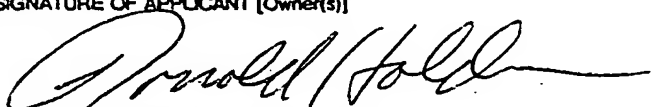
18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.? ☐ YES (If "YES," through ☐ Plant Variety Protection Act ☐ Patent Act. Give date: _____). ☒ NO

19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRIES? ☐ YES (If "YES," GIVE NAMES OF COUNTRIES AND DATES) _____ ☒ NO

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in section 41, and is entitled to protection under the provisions of section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT [Owner(s)] 	CAPACITY OR TITLE PRESIDENT	DATE
SIGNATURE OF APPLICANT [Owner(s)]	CAPACITY OR TITLE	DATE

Origin and Breeding History of the Inbred

Exhibit A

LH185 was developed from the single cross LH59 x LH123Ht by selfing and using the pedigree system of plant breeding. Yield, stalk quality, root quality, disease tolerance, late plant greenness, late plant intactness, ear retention, pollen shedding ability, silking ability and corn borer tolerance were the criteria used to determine the rows from which ears were selected.

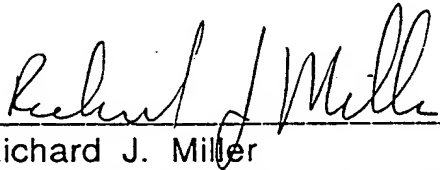
LH59 and LH123Ht, the progenitors of LH185, are both proprietary field corn inbred lines of Holden's Foundation Seeds, Inc. In 1987, Holden's Foundation Seeds, Inc. applied for plant variety protection of LH59. LH59 was given PVP certificate #8700213 on April 28, 1988. In 1983, Holden's Foundation Seeds, Inc. applied for plant variety protection of LH123Ht. LH123Ht was given certificate #8400030 on February 22, 1985. On the following pages are a summary and description of the development of LH185. Also included are copies of pages from Holden's Foundation Seeds, Inc. nursery books. The rows associated with the development of LH185 have been highlighted. Please note the "Ht" designation was dropped from LH123Ht in the nursery books for convenience.

Attached is a statement from Richard Miller of Holden's Foundation Seeds, Inc. stating that the line is stable, uniform and free of variance.

Uniformity Statement

Exhibit A

I have observed LH185 during the last four generations it has been increased: 1991 Iowa nursery row 7331; 1992 Iowa nursery rows 8969-8978; 1993 Hawaii production field #3A1; and 1993 Iowa production Harris field. In each of these increases, seeds from the previous generation were planted. LH185 is stable and uniform. The inbred line is also free of variance from within the population.

A handwritten signature in cursive script, reading "Richard J. Miller", is written over a horizontal line.

Richard J. Miller
Plant Breeder and Plant Pathologist
Holden's Foundation Seeds, Inc.

Origin and Breeding History of the Inbred
LH185 = Ex2797 = LH59 x LH123

Exhibit A

<u>Row/Field</u>	<u>Pedigree</u>	<u>Location</u>	<u>Year</u>
Harris	LH185	Iowa	1993
3A1	LH185	Hawaii	1993
8969-8978	Ex2797	Iowa	1992
7331	LH59 x LH123 @ 7	Iowa	1991
22302	LH59 x LH123 @ 6	Hawaii	1991
24610	LH59 x LH123 @ 5	Iowa	1990
26533	LH59 x LH123 @ 4	Hawaii	1990
23714	LH59 x LH123 @ 3	Hawaii	1989
18352	LH59 x LH123 @ 2	Iowa	1988
25562	LH59 x LH123 @ 1	Hawaii	1988
34841	LH59 x LH123	Iowa	1987
32495-32496	LH59	Iowa	1986
32529-32530	LH123		

245th St. Dirt Road

Sorg
KSS55Y
6/11/93
12.7 A

DrillBeans
Gu7272
6/11/93
16.8 A

4.5 A

LH185
Two lots:
PP 1301
2JX-HA21B-00
LF 1380
2JY-HA25C-00
22.8 A

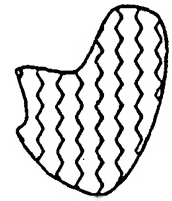
Sorg 1 A

LH185 Block
PP 1301 2JX-HA21B-00

DrillBeans
Gu7272
6/11/93
2.9 A

Sorg
6/11/93
7 A
DrillBeans
Gu7272
6/11/93
3.7 A

Solid Block
8.5 A



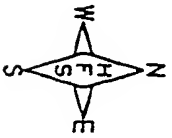
LH185
PP 1301 2JX-HA21B-00 1.5 A
LF 1380 2JY-HA25C-00 2.5 A
LH185 C&T 1388 H93 H.P. 24 rows
Solid Block

Sorg
KSS55Y
6/11/93
25 A
19 A

V Ave

Harris

York 14
#47

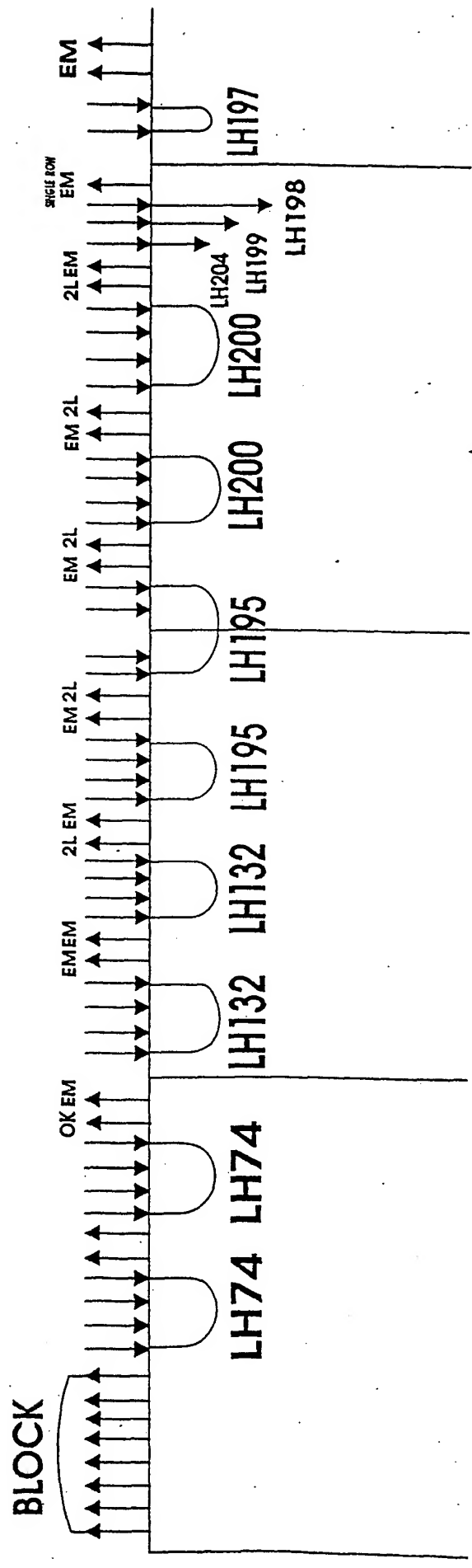
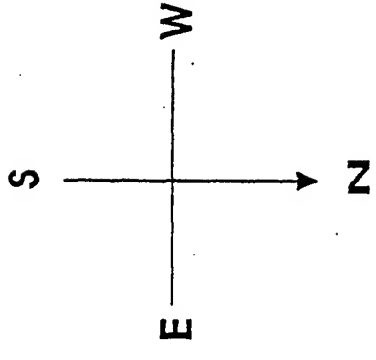


LH185 poll
Fert All
Pop. 22,000
June 1

Corn: 41.3
Beans: 27.9
Sorg: 18.5

41.3 A Total

LH185



TYPE: PRODUCTION
LOCATION: TAMURA 3A1
PLANTED: 11/27/92

2.13 ACRES

UPPER IM-HOFF NURSERY BLOCK B

23 Rows of Waterway

Border
Border
Border
Border
Border
Border
Border
Border
Border
Border

LH230
LH230
LH230
LH230
LH230
NC258
NC258
NC258
NC258
NC258

2 Rows of Waterway

8946
8947
8948
8949
8950
8951
8952
8953
8954
8955
8956
8957
8958
8959
8960
8961
8962
8963
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8967
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8971
8972
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8976
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8980
8981
8982
8983
8984
8985

LH166 6371-3 M91
LH166 6371-4 M91
LH166 6371-5 M91
LH225 6221-1 M91
LH225 6221-2 M91
LH225 6221-3 M91
LH225 6221-4 M91
LH225 6221-5 M91
LH225 6221-6 M91
LH225 6221-7 M91
LH225 6221-8 M91
LH225 6221-9 M91
LH225 6221-10 M91
LH225 6221-11 M91
LH225 6221-12 M91
LH225 6221-13 M91
LH225 6221-14 M91
LH225 6221-15 M91
LH225 6221-16 M91
LH225 6221-17 M91
LH225 6221-18 M91
LH225 6221-19 M91
LH225 6221-20 M91
Ex2797 7331-1 I91
Ex2797 7331-2 I91
Ex2797 7331-3 I91
Ex2797 7331-4 I91
Ex2797 7331-5 I91
Ex2797 7331-6 I91
Ex2797 7331-7 I91
Ex2797 7331-8 I91
Ex2797 7331-9 I91
Ex2797 7331-10 I91
Ex2798 7336-1 I91
Ex2798 7336-2 I91
Ex2798 7336-3 I91
Ex2798 7336-4 I91
Ex2798 7336-5 I91
Ex2798 7336-6 I91
Ex2798 17030-1 H92

RANGE 19 E-W

8986
8987
8988
8989
8990
8991
8992
8993
8994
8995
8996
8997
8998
8999
9000
9001
9002
9003
9004
9005
9006
9007

Ex2798 17030-2 H92
Ex2798 17030-3 H92
Ex2798 17030-4 H92
Ex2799 7337-1 I91
Ex2799 7337-2 I91
Ex2799 7337-3 I91
Ex2799 7337-4 I91
Ex2799 7337-5 I91
Ex2799 7337-6 I91
Ex2799 7337-7 I91
Ex2799 7337-8 I91
Ex2799 7337-9 I91
Ex2799 7337-10 I91
Ex2800 7342-1 I91
Ex2800 7342-2 I91
Ex2800 7342-3 I91
Ex2800 7342-4 I91
Ex2800 7342-5 I91
Ex2800 7342-6 I91
Ex2800 17032-1 H92
Ex2800 17032-2 H92
Ex2800 17032-3 H92

UPPER IMHOFF NURSERY BLOCK A

7303	LH59	x	LH123	RM07	25562-11-2-1-2-1-1	22286	H91
7304	LH59	x	LH123	RM07	25562-11-2-1-2-1-2	22286	H91
7305	LH59	x	LH123	RM07	25562-11-2-1-2-2-1	22288	H91
7306	LH59	x	LH123	RM07	25562-11-2-1-2-2-2	22288	H91
7307	LH59	x	LH123	RM07	25562-11-2-1-2-2-3	22288	H91
7308	LH59	x	LH123	RM07	25562-11-2-2-1-1-1	22290	H91
7309	LH59	x	LH123	RM07	25562-11-2-2-1-1-2	22290	H91
7310	LH59	x	LH123	RM07	25562-11-2-2-1-1-3	22290	H91
7311	LH59	x	LH123	RM07	25562-11-2-2-1-2-1	22292	H91
7312	LH59	x	LH123	RM07	25562-11-2-2-1-2-2	22292	H91
7313	LH59	x	LH123	RM07	25562-11-2-2-1-2-3	22292	H91
7314	LH59	x	LH123	RM07	25562-11-2-3-1-1-1	22294	H91
7315	LH59	x	LH123	RM07	25562-11-2-3-1-1-2	22294	H91
7316	LH59	x	LH123	RM07	25562-11-2-3-1-1-3	22294	H91
7317	LH59	x	LH123	RM07	25562-11-2-3-1-2-1	22296	H91
7318	LH59	x	LH123	RM07	25562-11-2-3-1-2-2	22296	H91
7319	LH59	x	LH123	RM07	25562-11-2-3-1-2-3	22296	H91
7320	LH59-2		22310	H91			
7321	LH51-2		22312	H91			
7322	LH132						
7323	LH59	x	LH123	RM07	25562-11-2-3-3-1-1	22298	H91
7324	LH59	x	LH123	RM07	25562-11-2-3-3-1-2	22298	H91
7325	LH59	x	LH123	RM07	25562-11-2-3-3-1-3	22298	H91
7326	LH59	x	LH123	RM07	25562-11-2-3-3-2-1	22300	H91
7327	LH59	x	LH123	RM07	25562-11-2-3-3-2-2	22300	H91
7328	LH59	x	LH123	RM07	25562-11-2-3-3-2-3	22300	H91
7329	LH59	x	LH123	RM07	25562-22-1-1-2-1-1	22302	H91
7330	LH59	x	LH123	RM07	25562-22-1-1-2-1-2	22302	H91
7331	LH59	x	LH123	RM07	25562-22-1-1-2-1-3	22302	H91
7332	LH59	x	LH123	RM07	25562-22-1-1-2-2-1	22304	H91
7333	LH59	x	LH123	RM07	25562-22-1-1-2-2-2	22304	H91
7334	LH59	x	LH123	RM07	25562-22-1-1-2-2-3	22304	H91
7335	LH59	x	LH123	RM07	25562-22-1-1-2-3-1	22306	H91
7336	LH59	x	LH123	RM07	25562-22-1-1-2-3-2	22306	H91
7337	LH59	x	LH123	RM07	25562-22-1-1-2-4-1	22308	H91
7338	LH59	x	LH123	RM07	25562-22-1-1-2-4-2	22308	H91
7339	LH59	x	LH123	RM07	25562-22-1-1-2-4-3	22308	H91
7340	LH59	x	LH123	RM07	25562-22-1-1-3-1-1	22316	H91
7341	LH59	x	LH123	RM07	25562-22-1-1-3-1-2	22316	H91
7342	LH59	x	LH123	RM07	25562-22-1-1-3-1-3	22316	H91
7343	LH59	x	LH123	RM07	25562-22-1-1-3-2-1	22318	H91
7344	LH59	x	LH123	RM07	25562-22-1-1-3-2-2	22318	H91
7345	LH59	x	LH123	RM07	25562-22-1-1-3-2-3	22318	H91
7346	LH59	x	LH123	RM07	25562-22-1-1-3-3-1	22320	H91
7347	LH59	x	LH123	RM07	25562-22-1-1-3-3-2	22320	H91
7348	LH59	x	LH123	RM07	25562-22-1-1-3-4-1	22322	H91
7349	LH59	x	LH123	RM07	25562-22-1-1-3-4-2	22322	H91
7350	LH59	x	LH123	RM07	25562-22-1-1-3-4-3	22322	H91
7351	LH59	x	LH123	RM07	25562-22-1-2-1-1-1	22324	H91
7352	LH59	x	LH123	RM07	25562-22-1-2-1-2-1	22326	H91
7353	LH59	x	LH123	RM07	25562-22-1-2-1-2-2	22326	H91
7354	LH59-3		22310	H91			
7355	LH51-3		22312	H91			
7356	LH132						
7357	LH59	x	LH123	RM07	25562-22-1-3-1-1-1	22328	H91
7358	LH59	x	LH123	RM07	25562-22-1-3-1-1-2	22328	H91
7359	LH59	x	LH123	RM07	25562-22-1-3-1-1-3	22328	H91
7360	LH59	x	LH123	RM07	25562-22-1-3-1-2-1	22330	H91
7361	LH59	x	LH123	RM07	25562-22-1-3-1-2-2	22330	H91
7362	LH59	x	LH123	RM07	25562-22-1-3-3-1-1	22332	H91
7363	LH59	x	LH123	RM07	25562-22-1-3-3-1-2	22332	H91
7364	LH59	x	LH123	RM07	25562-22-1-3-3-2-1	22334	H91
7365	LH59	x	LH123	RM07	25562-22-1-3-3-2-2	22334	H91
7366	LH59	x	LH123	RM07	25562-22-1-3-3-4-1	22338	H91
7367	LH59	x	LH123	RM07	25562-22-1-3-3-4-2	22338	H91
7368	LH59	x	LH123	RM07	25562-22-1-3-3-4-3	22338	H91
7369	LH59	x	LH123	RM07	25562-25-1-1-1-1-1	22340	H91
7370	LH59	x	LH123	RM07	25562-25-1-1-1-1-2	22340	H91
7371	LH59	x	LH123	RM07	25562-25-1-1-1-1-3	22340	H91
7372	LH59	x	LH123	RM07	25562-25-1-1-1-2-1	22342	H91
7373	LH59	x	LH123	RM07	25562-25-1-1-1-2-2	22342	H91
7374	LH59	x	LH123	RM07	25562-25-1-1-1-2-3	22342	H91
7375	LH59	x	LH123	RM07	25562-25-1-1-1-3-1	22344	H91
7376	LH59	x	LH123	RM07	25562-25-1-1-1-3-2	22344	H91
7377	LH59	x	LH123	RM07	25562-25-1-1-2-1-1	22346	H91
7378	LH59	x	LH123	RM07	25562-25-1-1-2-1-2	22346	H91
7379	LH59	x	LH123	RM07	25562-25-1-1-2-1-3	22346	H91

1A B2 (90)

22285	LH132	
22286	LH59 x LH123 RM06	25562-11-2-1-2-1 24602 I90
22287	LH132	
22288	LH59 x LH123 RM06	25562-11-2-1-2-2 24602 I90
22289	LH132	
22290	LH59 x LH123 RM06	25562-11-2-2-1-1 24604 I90
22291	LH132	
22292	LH59 x LH123 RM06	25562-11-2-2-1-2 24604 I90
22293	LH132	
22294	LH59 x LH123 RM06	25562-11-2-3-1-1 24606 I90
22295	LH132	
22296	LH59 x LH123 RM06	25562-11-2-3-1-2 24606 I90
22297	LH132	
22298	LH59 x LH123 RM06	25562-11-2-3-3-1 24608 I90
22299	LH132	
22300	LH59 x LH123 RM06	25562-11-2-3-3-2 24608 I90
22301	LH132	
22302	LH59 x LH123 RM06	25562-22-1-1-2-1 24610 I90
22303	LH132	
22304	LH59 x LH123 RM06	25562-22-1-1-2-2 24610 I90
22305	LH132	

RANGE 47 E-W

22306	LH59 x LH123 RM06	25562-22-1-1-2-3 24610 I90
22307	LH132	
22308	LH59 x LH123 RM06	25562-22-1-1-2-4 24610 I90
22309	LH132	
22310	LH59	
22311	LH132	
22312	LH51	
22313	LH132	
22314	LH181	
22315	LH132	
22316	LH59 x LH123 RM06	25562-22-1-1-3-1 24611 I90
22317	LH132	
22318	LH59 x LH123 RM06	25562-22-1-1-3-2 24611 I90
22319	LH132	
22320	LH59 x LH123 RM06	25562-22-1-1-3-3 24611 I90
22321	LH132	
22322	LH59 x LH123 RM06	25562-22-1-1-3-4 24611 I90
22323	LH132	
22324	LH59 x LH123 RM06	25562-22-1-2-1-1 24612 I90
22325	LH132	
22326	LH59 x LH123 RM06	25562-22-1-2-1-2 24612 I90
22327	LH132	
22328	LH59 x LH123 RM06	25562-22-1-3-1-1 24614 I90
22329	LH132	
22330	LH59 x LH123 RM06	25562-22-1-3-1-2 24614 I90
22331	LH132	
22332	LH59 x LH123 RM06	25562-22-1-3-3-1 24615 I90
22333	LH132	
22334	LH59 x LH123 RM06	25562-22-1-3-3-2 24615 I90
22335	LH132	
22336	LH59 x LH123 RM06	25562-22-1-3-3-3 24615 I90
22337	LH132	
22338	LH59 x LH123 RM06	25562-22-1-3-3-4 24615 I90
22339	LH132	
22340	LH59 x LH123 RM06	25562-25-1-1-1-1 24616 I90
22341	LH132	
22342	LH59 x LH123 RM06	25562-25-1-1-1-2 24616 I90
22343	LH132	
22344	LH59 x LH123 RM06	25562-25-1-1-1-3 24616 I90
22345	LH132	
22346	LH59 x LH123 RM06	25562-25-1-1-2-1 24617 I90
22347	LH132	
22348	LH132	
22349	LH132	
22350	LH132	
22351	LH132	
22352	LH132	
22353	LH132	
22354	LH132	
22355	LH132	
22356	LH132	

WEST WETJEN NURSERY BLOCK C

[illegible]

SR=EM
TH=EM

RANGE 15 W-E

[illegible]

OLOOLO 2AB7 (89)

EM

26504	LH192
26505	LH192
26506	LH192
26507	LH192
26508	LH192
26509	LH59 x LH123 RM04 25562-1-2-1 23672 H89
26510	LH74
26511	LH59 x LH123 RM04 25562-3-1-1 23678 H89
26512	LH74
26513	LH59 x LH123 RM04 25562-3-2-1 23680 H89
26514	LH74
26515	LH59 x LH123 RM04 25562-3-2-2 23680 H89
26516	LH74
26517	LH59 x LH123 RM04 25562-3-2-3 23680 H89
26518	LH74

RANGE 55 W-E

26519	LH59 x LH123 RM04 25562-4-1-1 23682 H89
26520	LH74
26521	LH59 x LH123 RM04 25562-7-2-1 23686 H89
26522	LH74
26523	LH59 x LH123 RM04 25562-7-2-2 23686 H89
26524	LH74
26525	LH59 x LH123 RM04 25562-7-2-3 23686 H89
26526	LH74
26527	LH59 x LH123 RM04 25562-11-2-1 23696 H89
26528	LH74
26529	LH59 x LH123 RM04 25562-11-2-2 23696 H89
26530	LH74
26531	LH59 x LH123 RM04 25562-11-2-3 23696 H89
26532	LH74
26533	LH59 x LH123 RM04 25562-22-1-1 23714 H89
26534	LH74
26535	LH59 x LH123 RM04 25562-22-1-2 23714 H89
26536	LH74
26537	LH59 x LH123 RM04 25562-22-1-3 23714 H89
26538	LH74
26539	LH59 x LH123 RM04 25562-25-1-1 23720 H89
26540	LH74
26541	LH59 x LH123 RM04 25562-25-1-2 23720 H89
26542	LH74
26543	LH59 x LH123 RM04 25562-25-1-3 23720 H89
26544	LH74
26545	LH59 x LH123 RM04 25562-25-2-2 23722 H89
26546	LH74
26547	LH59 x LH123 RM04 25562-25-2-3 23722 H89
26548	LH74
26549	LH59 x LH123 RM04 25562-32-2-1 23732 H89
26550	LH74
26551	LH59 x LH123 RM04 25562-32-2-2 23732 H89
26552	LH74
26553	LH59
26554	LH74
26555	LH59 x LH123 RM04 25562-37-1-2 23738 H89
26556	LH74
26557	LH59 x LH123 RM04 25562-37-2-1 23740 H89
26558	LH74
26559	LH59 x LH123 RM04 25562-40-1-1 23744 H89
26560	LH74
26561	LH59 x LH123 RM04 25562-40-1-2 23744 H89
26562	LH74
26563	LH59 x LH123 RM04 25562-40-1-3 23744 H89
26564	LH74
26565	LH59 x LH123 RM04 25562-40-2-1 23746 H89
26566	LH74
26567	LH59 x LH123 RM04 25562-40-2-2 23746 H89
26568	LH74
26569	LH59 x LH123 RM04 25562-40-2-3 23746 H89
26570	LH74
26571	LH59 x LH123 RM04 25562-40-3-2 23748 H89
26572	LH74
26573	LH59 x LH123 RM04 25562-40-4-1 23750 H89
26574	LH74

RANGE 56 E-W

2AB4 SHORT (38)

2668	873 x LHE136		
2669	873 x LHE136		
2670	LH59 x LH123 RM03 25562-1-1 18331 I88	*FM	
2671	873 x LHE136		
2672	LH59 x LH123 RM03 25562-1-2 18331 I88	*FM	
2673	873 x LHE136		
2674	LH59 x LH123 RM03 25562-1-3 18331 I88	*FM	

RANGE 53 W-E

2675	873 x LHE136		
2676	LH59 x LH123 RM03 25562-1-4 18331 I88	*FM	
2677	873 x LHE136		
2678	LH59 x LH123 RM03 25562-3-1 18333 I88	*FM	
2679	873 x LHE136		
2680	LH59 x LH123 RM03 25562-3-2 18333 I88	*FM	
2681	873 x LHE136		
2682	LH59 x LH123 RM03 25562-4-1 18334 I88	*FM	
2683	873 x LHE136		
2684	LH59 x LH123 RM03 25562-7-1 18337 I88	*FM	
2685	873 x LHE136		
2686	LH59 x LH123 RM03 25562-7-2 18337 I88	*FM	
2687	873 x LHE136		
2688	LH59 x LH123 RM03 25562-9-1 18339 I88	*FM	
2689	873 x LHE136		
2690	LH59 x LH123 RM03 25562-9-2 18339 I88	*FM	
2691	873 x LHE136		
2692	LH59 x LH123 RM03 25562-9-3 18339 I88	*FM	
2693	873 x LHE136		
2694	LH59 x LH123 RM03 25562-11-1 18341 I88	*FM	
2695	873 x LHE136		
2696	LH59 x LH123 RM03 25562-11-2 18341 I88	*FM	
2697	873 x LHE136		
2698	LH59 x LH123 RM03 25562-11-3 18341 I88	*FM	
2699	873 x LHE136		
2700	LH59 x LH123 RM03 25562-13-1 18343 I88	*FM	
2701	873 x LHE136		
2702	LH59 x LH123 RM03 25562-13-2 18343 I88	*FM	
2703	873 x LHE136		
2704	LH59 x LH123 RM03 25562-13-3 18343 I88	*FM	

RANGE 54 E-W

2705	873 x LHE136		
2706	LH59 x LH123 RM03 25562-13-4 18343 I88	*FM	
2707	873 x LHE136		
2708	LH59 x LH123 RM03 25562-17-1 18347 I88	*FM	
2709	873 x LHE136		
2710	LH59 x LH123 RM03 25562-17-2 18347 I88	*FM	
2711	873 x LHE136		
2712	LH59 x LH123 RM03 25562-21-1 18351 I88	*FM	
2713	873 x LHE136		
2714	LH59 x LH123 RM03 25562-22-1 18352 I88	*FM	
2715	873 x LHE136		
2716	LH59 x LH123 RM03 25562-24-1 18354 I88	*FM	
2717	873 x LHE136		
2718	LH59 x LH123 RM03 25562-24-2 18354 I88	*FM	
2719	873 x LHE136		
2720	LH59 x LH123 RM03 25562-25-1 18355 I88	*FM	
2721	873 x LHE136		
2722	LH59 x LH123 RM03 25562-25-2 18355 I88	*FM	
2723	873 x LHE136		
2724	LH59 x LH123 RM03 25562-31-1 18361 I88	*FM	
2725	873 x LHE136		
2726	LH59 x LH123 RM03 25562-31-2 18361 I88	*FM	
2727	873 x LHE136		
2728	LH59	*FM	
2729	873 x LHE136		
2730	LH59 x LH123 RM03 25562-32-1 18362 I88	*FM	
2731	873 x LHE136		
2732	LH59 x LH123 RM03 25562-32-2 18362 I88	*FM	
2733	873 x LHE136		
2734	LH59 x LH123 RM03 25562-36-1 18366 I88	*FM	

RANGE 55 W-E

877 x LHE136

ECKHOLM NURSERY

18287	LH63 x LH51 MA02 25602-86 H88
18288	LH63 x LH51 MA02 25602-87 H88
18289	LH63 x LH51 MA02 25602-88 H88
18290	LH63 x LH51 MA02 25602-89 H88
18291	LH63 x LH51 MA02 25602-90 H88
18292	LH63 x LH51 MA02 25602-91 H88
18293	LH63 x LH51 MA02 25602-92 H88
18294	LH63 x LH51 MA02 25602-93 H88
18295	LH63 x LH51 MA02 25602-94 H88
18296	LH63 x LH51 MA02 25602-95 H88
18297	LH63 x LH51 MA02 25602-96 H88
18298	LH63 x LH51 MA02 25602-97 H88
18299	LH63 x LH51 MA02 25602-98 H88
18300	LH63 x LH51 MA02 25602-99 H88
18301	LH63 x LH51 MA02 25602-100 H88
18302	LH63 x LH51 MA02 25602-101 H88
18303	LH63 x LH51 MA02 25602-102 H88
18304	LH63 x LH51 MA02 25602-103 H88
18305	LH63 x LH51 MA02 25602-104 H88
18306	LH63 x LH51 MA02 25602-105 H88
18307	LH63 x LH51 MA02 25602-106 H88
18308	LH63 x LH51 MA02 25602-107 H88
18309	LH63 x LH51 MA02 25602-108 H88
18310	LH63 x LH51 MA02 25602-109 H88
18311	LH63 x LH51 MA02 25602-110 H88
18312	LH63 x LH51 MA02 25602-111 H88
18313	LH63 x LH51 MA02 25602-112 H88
18314	LH63 x LH51 MA02 25602-113 H88
18315	LH63 x LH51 MA02 25602-114 H88
Border	873 x LH132
Border	873 x LH132

RANGE 10 N-S

Border	873 x LH132
Border	873 x LH132
18316	LH63 x LH51 MA02 25602-115 H88
18317	LH63 x LH51 MA02 25602-116 H88
18318	LH63 x LH51 MA02 25602-117 H88
18319	LH63 x LH51 MA02 25602-118 H88
18320	LH63 x LH51 MA02 25602-119 H88
18321	LH63 x LH51 MA02 25602-120 H88
18322	LH63 x LH51 MA02 25602-121 H88
18323	LH63 x LH51 MA02 25602-122 H88
18324	LH63 x LH51 MA02 25602-123 H88
18325	LH63 x LH51 MA02 25602-124 H88
18326	LH63 x LH51 MA02 25602-125 H88
18327	873 x LH132
18328	873 x LH132
18329	873 x LH132
18330	873 x LH132
18331	LH59 x LH123 RH02 25562-1 H88
18332	LH59 x LH123 RH02 25562-2 H88
18333	LH59 x LH123 RH02 25562-3 H88
18334	LH59 x LH123 RH02 25562-4 H88
18335	LH59 x LH123 RH02 25562-5 H88
18336	LH59 x LH123 RH02 25562-6 H88
18337	LH59 x LH123 RH02 25562-7 H88
18338	LH59 x LH123 RH02 25562-8 H88
18339	LH59 x LH123 RH02 25562-9 H88
18340	LH59 x LH123 RH02 25562-10 H88
18341	LH59 x LH123 RH02 25562-11 H88
18342	LH59 x LH123 RH02 25562-12 H88
18343	LH59 x LH123 RH02 25562-13 H88
18344	LH59 x LH123 RH02 25562-14 H88
18345	LH59 x LH123 RH02 25562-15 H88
18346	LH59 x LH123 RH02 25562-16 H88
18347	LH59 x LH123 RH02 25562-17 H88
18348	LH59 x LH123 RH02 25562-18 H88
18349	LH59 x LH123 RH02 25562-19 H88
18350	LH59 x LH123 RH02 25562-20 H88
18351	LH59 x LH123 RH02 25562-21 H88
18352	LH59 x LH123 RH02 25562-22 H88
18353	LH59 x LH123 RH02 25562-23 H88
18354	LH59 x LH123 RH02 25562-24 H88
18355	LH59 x LH123 RH02 25562-25 H88

TAHURA JA2 (87)

25519	LH60 x LH51	GA01	34858	I87
25520	LH60 x LH51	GA01	34858	I87
25521	LH60 x LH51	GA01	34858	I87
25522	LH152 x LH60	GA01	34886	I87
25523	LH152 x LH60	GA01	34886	I87
25524	LH152 x LH60	GA01	34886	I87
25525	LH152 x LH60	GA01	34886	I87
25526	LH152 x LH60	GA01	34886	I87
25527	LH152 x LH60	GA01	34886	I87
25528	LH152 x LH60	GA01	34886	I87
25529	LH152 x LH60	GA01	34886	I87
25530	LH152 x LH60	GA01	34886	I87
25531	LH152 x LH60	GA01	34886	I87
25532	LH152 x LH60	GA01	34886	I87
25533	LH152 x LH60	GA01	34886	I87
25534	LH152 x LH60	GA01	34886	I87
25535	LH152 x LH60	GA01	34886	I87

RANGE 5 W-E

25536	LH152 x LH60	GA01	34886	I87
25537	LH152 x LH60	GA01	34886	I87
25538	LH152 x LH60	GA01	34886	I87
25539	LH152 x LH60	GA01	34886	I87
25540	LH152 x LH60	GA01	34886	I87
25541	LH152 x LH60	GA01	34886	I87
25542	LH152 x LH60	GA01	34886	I87
25543	LH152 x LH60	GA01	34886	I87
25544	LH152 x LH60	GA01	34886	I87
25545	LH152 x LH60	GA01	34886	I87
25546	LH152 x LH60	GA01	34886	I87
25547	LH152 x LH60	GA01	34886	I87
25548	LH152 x LH60	GA01	34886	I87
25549	LH152 x LH60	GA01	34886	I87
25550	LH152 x LH60	GA01	34886	I87
25551	LH152 x LH60	GA01	34886	I87
25552	LH152 x LH60	GA01	34886	I87
25553	LH152 x LH60	GA01	34886	I87
25554	LH152 x LH60	GA01	34886	I87
25555	LH152 x LH60	GA01	34886	I87

RANGE 6 E-W

25556	LH152 x LH60	GA01	34886	I87
25557	LH152 x LH60	GA01	34886	I87
25558	LH152 x LH60	GA01	34886	I87
25559	LH152 x LH60	GA01	34886	I87
25560	LH152 x LH60	GA01	34886	I87
25561	LH152 x LH60	GA01	34886	I87
25562	LH59 x LH123	RM01	34841	I87
25563	LH59 x LH123	RM01	34841	I87
25564	LH59 x LH123	RM01	34841	I87
25565	LH59 x LH123	RM01	34841	I87
25566	LH59 x LH123	RM01	34841	I87
25567	LH59 x LH123	RM01	34841	I87
25568	LH59 x LH123	RM01	34841	I87
25569	LH59 x LH123	RM01	34841	I87
25570	LH59 x LH123	RM01	34841	I87
25571	LH59 x LH123	RM01	34841	I87
25572	LH59 x LH123	RM01	34841	I87
25573	LH59 x LH123	RM01	34841	I87
25574	LH59 x LH123	RM01	34841	I87
25575	LH59 x LH123	RM01	34841	I87

RANGE 7 W-E

25576	LH59 x LH123	RM01	34841	I87
25577	LH59 x LH123	RM01	34841	I87
25578	LH59 x LH123	RM01	34841	I87
25579	LH59 x LH123	RM01	34841	I87
25580	LH59 x LH123	RM01	34841	I87
25581	LH59 x LH123	RM01	34841	I87
25582	LH59 x LH123	RM01	34841	I87
25583	LH59 x LH123	RM01	34841	I87
25584	LH59 x LH123	RM01	34841	I87
25585	LH59 x LH123	RM01	34841	I87

WEST WETJEN NURSERY

34799	LH61 x W117
34800	LH61 x LH82
34801	LH61 x LH64
34802	LH61 x LH93
34803	LH61 x LH63
34804	LH62 x W117
34805	LH62 x LH54
34806	LH62 x LH57
34807	LH62 x LH64
34808	LH62 x LH93
34809	LH62 x LH63
34810	E24 x CH105
34811	LH142 x CH105
34812	LH142 x A632
34813	LH142 x NA5
34814	LH142 x B73
34815	LH142 x DJ7
34816	NA5 x LH146
34817	NA5 x LH74
34818	LH54 x W117
34819	LH54 x LH59
34820	LH82 x LH94A
34821	LH82 x LH156
34822	LH82 x LH62
34823	LH82 x LH63
34824	LH91 x LH85
34825	LH91 x LH83
34826	LH91 x LH57
34827	LH91 x LH7
34828	LH57 x LH94A
34829	LH57 x LH40
34830	LH57 x D47-1
34831	LH64 x LH54
34832	LH64 x LH82
34833	LH64 x LH91
34834	LH64 x LH38

RANGE 51 W-E

34835	LH64 x LH51
34836	LH64 x LH123
34837	LH59 x LH64
34838	LH59 x LH38
34839	LH59 x LH63
34840	LH59 x LH51
34841	LH59 x LH123
34842	LH59 x LH122
34843	LH38 x LH59
34844	LH38 x LH63
34845	LH105 x LH39
34846	LH93 x LH94A
34847	LH95 x LH82
34848	LH95 x LH93
34849	LH94 x LH94A
34850	LH95 x LH57
34851	LH63 x LH54
34852	LH63 x LH57
34853	LH63 x LH64
34854	LH63 x LH51
34855	LH63 x LH123
34856	LH60 x LH40
34857	LH60 x LH66
34858	LH60 x LH51
34859	LH60 x LH50
34860	Ex1204 x LH50
34861	LH60 x LH156
34862	Ex1204 x LH63
34863	Ex1204 x LH51
34864	LH50 x LH58
34865	LH123 x LH66
34866	Ex1196 x LH57
34867	Ex1196 x LH64
34868	Ex1196 x LH50
34869	Ex1196 x LH153
34870	Ex1196 x LH152

NORTH WETJEN NURSERY

32480 A632
32481 E24
32482 LH142

RANGE 7 N-S

32483	NA5	
32484	LH54	
32485	LH82	
32486	LH82	
32487	LH91	
32488	LH91	*EH
32489	LH39	
32490	LH57	
32491	LH57	*EH
32492	LH64	
32493	LH64	
32494	LH64	*EH
32495	LH59	
32496	LH59	*EH
32497	LH38	
32498	LH105	
32499	H99	
32500	H99	*1L
32501	LH74	
32502	LH74	
32503	LH5-50	
32504	LH58	
32505	LH93	
32506	LH94A	
32507	LH95	
32508	LH109	
32509	LH40	
32510	LH40	*EH
32511	LH24	
32512	CB596	
32513	LH7	
32514	LH119	
32515	LHE136	
32516	B73	
32517	B84	
32518	LH63	
32519	LH63	*EH
32520	LH60	
32521	LH60	*EH
32522	Ex1204	
32523	LH51	
32524	LH51	*EH
32525	LH50	
32526	Mo17	
32527	LH153	
32528	LH152	
32529	LH123	
32530	LH123	
32531	Ex1196	
32532	LH117	
32533	NC250	
32534	H93	
32535	H100	
32536	LH150	
32537	LH156	
32538	LH156	
32539	LH47 x Pa875	
32540	Pa875 x LH51	
32541	LH152 x LH123	
32542	NC250 x B68	
32543	LHE136 x NC250	
	88 Rows of Waterway	

RANGE 8 S-N

32544	91 Rows of Waterway
32545	NC250 x H100
32546	LHE136 x LH1
32547	H84 x NC250
	H93 x NC250

Novelty Statement

Exhibit B

LH185 most closely resembles LH59, however, the most distinguishing characteristic is ear length. LH185 is longer in ear length than LH59. Enclosed is data collected at Williamsburg, Iowa, during the 1993 growing season comparing the ear lengths of LH185 and LH59 at 45 observations. The data suggests a significant difference at the 1% probability level according to a paired T test. Means show that on average LH185 is shorter in ear length than LH59.

LH185 vs LH59 : Ear Length 1993

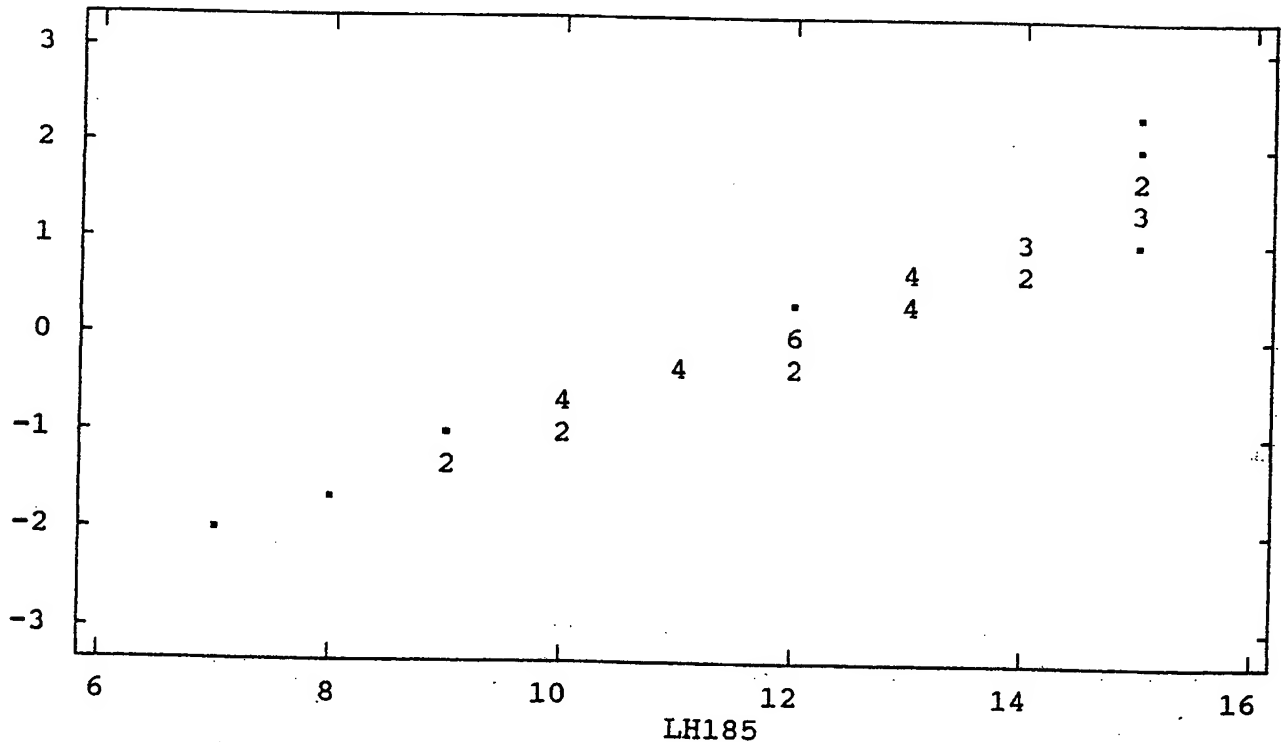
TOTAL OBSERVATIONS: 45

	LH185	LH59	NR1
N OF CASES	45	45	45
MINIMUM	7.000	15.000	-2.194
MAXIMUM	15.000	21.000	1.832
RANGE	8.000	6.000	4.026
MEAN	12.178	18.000	-0.065
VARIANCE	4.422	2.500	0.947
STANDARD DEV	2.103	1.581	0.973
STD. ERROR	0.313	0.236	0.145
SKEWNESS(G1)	-0.400	-0.140	-0.339
KURTOSIS(G2)	-0.577	-0.717	-0.382
SUM	548.000	810.000	-2.946
C.V.	0.173	0.088	-14.867
MEDIAN	12.000	18.000	-0.080

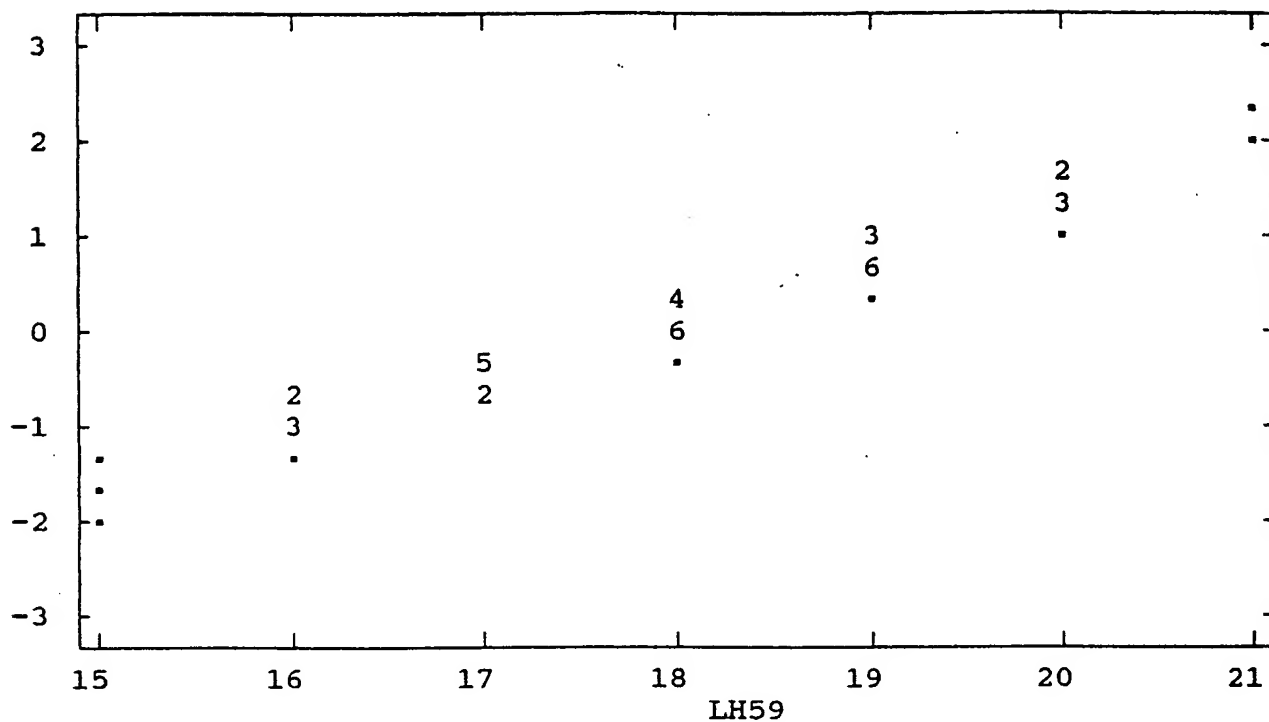
PAIRED SAMPLES T-TEST ON LH185 VS LH59 WITH 45 CASES

MEAN DIFFERENCE = -5.822
SD DIFFERENCE = 2.831
T = 3.797 DF = 44 PROB = 0.000

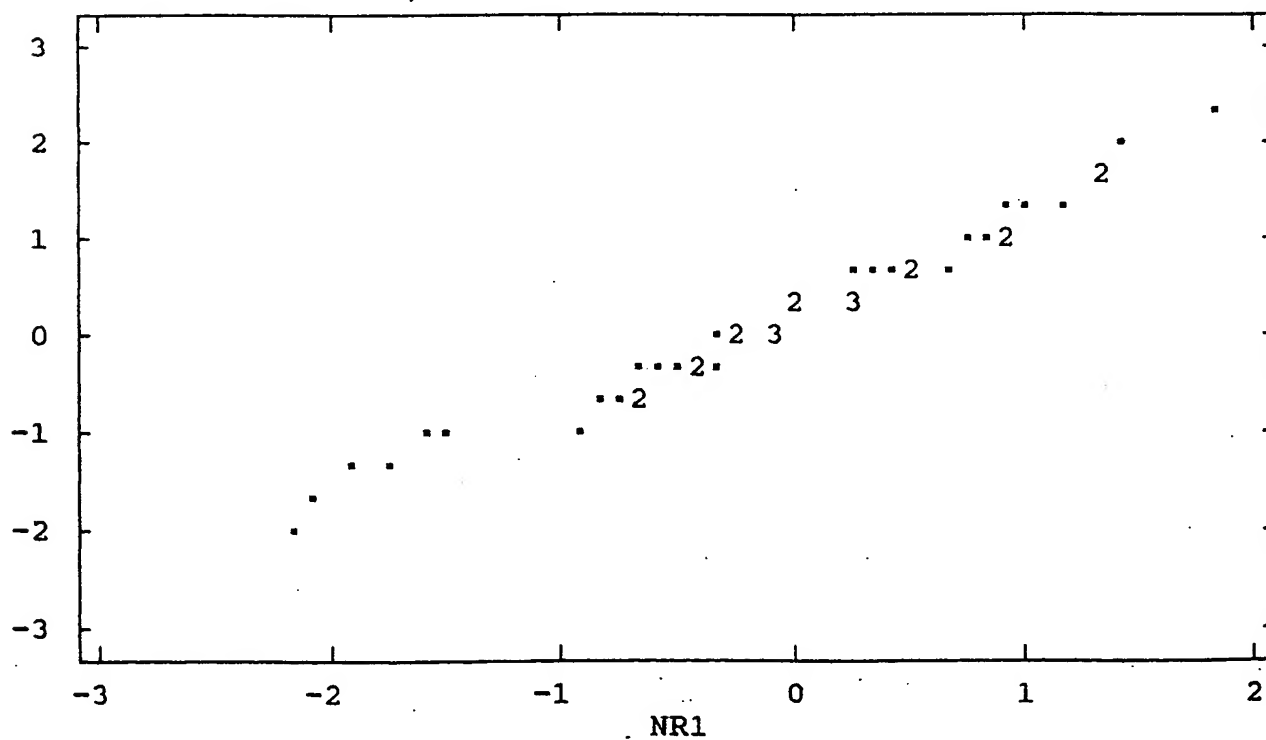
EXPECTED VALUE NORMAL PROBABILITY PLOT, N = 45



NORMAL PROBABILITY PLOT, N = 45



NORMAL PROBABILITY PLOT, N = 45



OBJECTIVE DESCRIPTION OF VARIETY
CORN (ZEA MAYS)

NAME OF APPLICANT(S)

HOLDEN'S FOUNDATION SEEDS, INC.

ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)

201 N. MAPLEWOOD AVENUE
WILLIAMSBURG, IA 52361

FOR OFFICIAL USE ONLY

PVPO NUMBER

VARIETY NAME OR TEMPORARY
DESIGNATION

LH185

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g., or) when number is either 99 or less or 9 or less.

1. TYPE:

1 = SWEET

2 = DENT

3 = FLINT

4 = FLOUR

5 = POP

6 = ORNAMENTAL

2. REGION WHERE BEST ADAPTED IN THE U.S.A.:

1 = NORTHWEST

2 = NORTHCENTRAL

3 = NORTHEAST

4 = SOUTHEAST

5 = SOUTHCENTRAL

6 = SOUTHWEST

7 = MOST REGIONS

3. MATURITY (In Region of Best Adaptability):

(Under "comments" (pg. 3) state how
heat units were calculated)

DAYS FROM EMERGENCE TO 50% OF PLANTS IN SILK

HEAT UNITS

DAYS FROM 50% SILK TO OPTIMUM EDIBLE QUALITY

HEAT UNITS

DAYS FROM 50% SILK TO HARVEST AT 25% KERNEL MOISTURE

HEAT UNITS

4. PLANT:

CM. HEIGHT (To tassel tip)

CM. EAR HEIGHT (To base of top ear)

CM. LENGTH OF TOP EAR INTERNODE

Number of Tillers:

1 = NONE

2 = 1-2

3 = 2-3

4 = > 3

Number of Ears Per Stalk:

1 = SINGLE

2 = SLIGHT TWO-EAR TENDENCY

3 = STRONG TWO-EAR TENDENCY 4 = THREE-EAR TENDENCY

Cytoplasm Type:

1 = NORMAL

2 = "T"

3 = "S"

4 = "C"

5 = OTHER (Specify)

5. LEAF (Field Corn Inbred Examples Given):

Color: *7.5GY 3/4 MUNSELL COLOR CHARTS FOR PLANT TISSUES

1 = LIGHT GREEN (HY)

2 = MEDIUM GREEN (WF9)

3 = DARK GREEN (B14)

4 = VERY DARK GREEN (K14)

Angle from Stalk (Upper half):

1 = < 30°

2 = 30-60°

3 = > 60°

Sheath Pubescence:

1 = LIGHT (W22)

2 = MEDIUM (WF9)

3 = HEAVY (OH26)

Marginal Waves:

1 = NONE (HY)

2 = FEW (WF9)

3 = MANY (OH7L)

Longitudinal Creases:

1 = ABSENT (OH51)

2 = FEW (OH56A)

3 = MANY (PA11)

Width:

CM. WIDEST POINT OF EAR NODE LEAF

Length:

CM. EAR NODE LEAF

NUMBER OF LEAVES PER MATURE PLANT

6. TASSEL:

0 4

NUMBER OF LATERAL BRANCHES

Branch Angle from Central Spike:

2

1 = < 30°

2 = 30-40°

3 = > 45°

Penduncle Length:

0 3

CM. FROM TOP LEAF TO BASAL BRANCHES

Pollen Shed:

2

1 = LIGHT (WF9)

2 = MEDIUM

3 = HEAVY (KY21)

1

Anther Color:

1 = YELLOW

2 = PINK

3 = RED

4 = PURPLE

5 = GREEN

5

Glume Color:

6 = OTHER (Specify) _____

Pollen Restoration for Cytoplasm (0 = Not Tested, 1 = Partial, 2 = Good)

0

"T"

0

"S"

0

"C"

0

OTHER (Specify Cytoplasm and degrees of restoration) _____

7. EAR (Husked Ear Data Except When Stated Otherwise):

1 2

CM LENGTH

3 5

MM. MID-POINT
DIAMETER

3 8

GM. WEIGHT

Kernel Rows:

2

1 = INDISTINCT

2 = DISTINCT

1 0

NUMBER

1

1 = STRAIGHT

2 = SLIGHTLY CURVED

3 = SPIRAL

Silk Color (Exposed at Silking Stage):

1

1 = GREEN

2 = PINK

3 = SALMON

4 = RED

Husk Color:

1

FRESH

1 = LIGHT GREEN

2 = DARK GREEN

3 = PINK

6

DRY

4 = RED

5 = PURPLE

6 = BUFF

Husk Extention: (Harvest Stage)

3

1 = SHORT (Ears Exposed) 2 = MEDIUM (Barely Covering Ear)

3 = LONG (8-10CM Beyond Ear Tip)

4 = VERY LONG (> 10 CM)

Husk Leaf:

2

1 = SHORT (< 8 CM)

2 = MEDIUM (8-15 CM)

3 = LONG (> 15 CM)

Shank:

0 5

CM LONG

8

NO. OF INTERNODES

Position at Dry Husk Stage:

1

1 = UPRIGHT

2 = HORIZONTAL

3 = PENDENT

Taper:

1

1 = SLIGHT

2 = AVERAGE

3 = EXTREME

Drying Time (Unhusked Ear):

2

1 = SLOW

2 = AVERAGE

3 = FAST

8. KERNEL (Dried):

Size (From Ear Mid-Point):

1 1

MM LONG

1 0

MM. WIDE

0 4

MM. THICK

Shape Grade (% Rounds)

3

1 = < 20

2 = 20-40

3 = 40-60

4 = 60-80

5 = > 80

8. KERNEL (Dried):

4

Pericarp Color:

1 = COLORLESS

2 = RED-WHITE CROWN

3 = TAN

4 = BRONZE

5 = BROWN

6 = LIGHT RED

7 = CHERRY RED

8 = VARIEGATED (Describe) _____

1

Aleurone Color:

1 = HOMOZYGOUS

2 = SEGREGATING (Describe) _____

1

1 = WHITE

2 = PINK

3 = TAN

4 = BROWN

5 = BRONZE

6 = RED

7 = PURPLE

8 = PALE PURPLE

9 = VARIEGATED (Describe) _____

3

Endosperm Color:

1 = WHITE

2 = PALE YELLOW

3 = YELLOW

4 = PINK-ORANGE

5 = WHITE CAP.

Endosperm Type:

3

1 = SWEET (su1)

2 = EXTRA SWEET (sh2)

3 = NORMAL STARCH

4 = HIGH AMYLOSE STARCH

5 = WAXY STARCH

6 = HIGH PROTEIN

7 = HIGH LYSINE

8 = OTHER (Specify) _____

2

7

GM. WEIGHT /100 SEEDS (Unsize Sample)

9. COB:

2

5

MM. DIAMETER AT MID-POINT

Strength:

2

1 = WEAK

2 = STRONG

Color:

1

1 = WHITE

2 = PINK

3 = RED

4 = BROWN

5 = VARIEGATED

6 OTHER (Specify) _____

10. DISEASE RESISTANCE (0 = Not Tested, 1 = Susceptible, 2 = Resistant): TOLERANT

0

STALK ROT (Diplodia)

0

STALK ROT (Fusarium)

0

STALK ROT (Gibberella)

2

NORTHERN LEAF BLIGHT

2

SOUTHERN LEAF BLIGHT

0

SMUT

0

SOUTHERN RUST

0

CORN SMUT

0

BACTERIAL WILT

0

BACTERIAL LEAF BLIGHT

0

MAIZE DWARF MOSAIC

0

STUNT

2

OTHER (Specify)

ANTHRACNOSE & GRAY LEAF SPOT

11. INSECT RESISTANCE (0 = Not Tested, 1 = Susceptible, 2 = Resistant):

0

CORNBORER

0

EARWORM

0

SAPBEETLE

0

APHID

0

ROOTWORM (Northern)

0

ROOTWORM (Western)

0

ROOTWORM (Southern)

0

OTHER (Specify) _____

12. VARIETIES MOST CLOSELY RESEMBLING THAT SUBMITTED FOR THE CHARACTERS GIVEN:

CHARACTER	VARIETY	CHARACTER	VARIETY
Maturity	LH59	Kernel Type	LH59
Plant Type	LH59	Quality (Edible)	
Ear Type	LH59	Usage	LH59

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Stringfield, G.H. Maize Inbred Lines of Ohio, Ohio A.E.S. Bul. 831. 1959.

Butler, D.R. 1954 - A System for the Classification of Corn Inbred Lines - PhD. Thesis, Ohio State University.

COMMENTS:

$$GDD = \frac{T_{max} + T_{min}}{2} - 50^{\circ}F$$

$$\begin{aligned} T_{max} &\leq 86^{\circ}F \\ T_{min} &\geq 50^{\circ}F \end{aligned}$$

Additional Description of the Inbred

Exhibit D

LH185 is a medium season field corn inbred. LH185 flowers 1-2 days earlier than LH59 and appears to be a good pollinator. LH185 has shown very good tolerance to Northern Leaf Spot Race 3 and Gray Leaf Spot. LH185 has exhibited excellent tolerance to leaf Anthracnose, Northern Leaf Blight and Southern Leaf Blight.

Compared to LH59 crosses, LH185 hybrids were substantially higher yielding with equal to slightly higher harvest moisture. Stalk quality and corn borer tolerance is also improved. The ears of LH185 hybrids are shorter and girthier than comparable LH59 hybrids. LH185 hybrids are best adapted to the central corn belt.

Statement of the Basis of Applicant Ownership

Exhibit E

Holden's Foundation Seeds, Inc., Williamsburg, Iowa, is the sole owner and breeder of the LH185 corn inbred line for which it solicits a certificate of protection.

